

REMARKS

The Office Action of March 14, 2005 has been received and carefully reviewed. In response, the abstract and portions of the specification have been amended without addition of new matter, claims 1, 7, 8, 12-17, 19, and 21-30 have been amended without narrowing the scope thereof, with claims 13, 14, 28, and 29 being rewritten in independent form, and new claims 31-54 have been added, whereby claims 1-54 are currently pending in the application. Applicants have filed herewith a supplemental Information Disclosure statement to correctly identify U.S. patents Sakai 5,053,598 incorporated by reference in the original application and Casset 5,072,872, and note that the above amendment to page 13 of the specification addresses the drawing objection of the Office Action without requiring drawing corrections. Applicants further note with appreciation the indication in the Office Action that claims 13, 14, 28, and 29 would be allowable if rewritten in independent form, and also note the prior art made of record but not relied upon in the Office Action. The invention relates to wire gripping devices and compression cylinders for welding wire feeders in which spring mechanisms with two or more spring moduli are provided to facilitate wire feeding gripping force generation for a wide range of welding wire types without structural adjustment or modification. As discussed further below, the primary reference Kensrue 6,568,578 does not teach or suggest this feature of the pending claims, but rather requires user adjustment to change gripping force. Accordingly, the pending claims are believed to be in condition for allowance, and notice thereof is respectfully requested in view of the above amendments and the following remarks.

I. REQUIREMENT FOR NEW IDS

The Office Action cited typographical errors in the IDS of December 18, 2003, and requested submission of a new IDS including corrected citations to the two references circled on the form 1449 attached to the Office Action. Applicants have filed herewith a supplemental IDS citing Sakai 5,053,598 and Casset 5,072,872 in accordance with the Examiner's suggestions in the Office Action, and hereby request consideration of these references.

II. DRAWINGS

The Office Action objected to the drawings, in particular Figure 5, as including reference character 262 not mentioned in the specification. By the above amendment, a typographical error has been corrected in the specification to correctly identify point 262 in Fig. 5 (previously incorrectly

identified as "260" and corrected in substitute paragraph at page 13, lines 6-18 of the specification), whereby the objection has been addressed without requiring changes to the drawings.

III. ABSTRACT

The Abstract was objected to for including the phrase "is disclosed". A substitute abstract has been provided in the amendment above, by which this phrase has been deleted in accordance with the Examiner's suggestion, whereby the objection has been addressed.

IV. SPECIFICATION

The Office Action objected to the specification for various informalities which have been addressed by the above amendment. In particular, a typographical error has been remedied on page 1 to correctly reference Sakai 5,053,598 (previously "Sakai 5,053,591", also addressed in the attached supplemental IDS). In addition, the paragraph at page 10, lines 12-18 has been amended to substitute "pivot" for the word "lever" in two places in reference to pivot mount 86 in accordance with the Examiner's suggestions, whereby the specification objections have been addressed without addition of new matter.

V. CLAIM OBJECTIONS

Several informalities in the claims were noted in the Office Action, which have been addressed in the above amendments to claims 1, 16, 17, and 21-30. Various other informalities have also been addressed in the claims, including spelling issues (claims 8, 12, 13, 15-17, 19, and 26-28) and antecedent basis issues (claims 13-15, 17, and 21-30), whereby no new matter has been added and the claims have not been narrowed. Applicants therefore submit the stated claim objections in the Office Action and other informalities in the claims have now been addressed by the above amendment.

VI. REJECTION OF CLAIMS 1-6, 11, 12, 15-24, 26, 27, AND 30 UNDER 35 U.S.C. § 102

Claims 1-6, 11, 12, 15-24, 26, 27, and 30 were rejected under 35 U.S.C. § 102 as being anticipated by Kensrue 6,568,578. Applicants submit that Kensrue 6,568,578 fails to teach or suggest each and every element of claims 1-6, 11, 12, 15-24, 26, 27, and 30, whereby reconsideration and withdrawal of these claim rejections is respectfully requested for at least the following reasons.

Independent claim 1 is directed to a wire gripping device for a welding wire feeder, having an adjustable spring device between a support member and a lever for biasing a second pinch roll toward a first pinch roll to produce a gripping force on a wire therebetween. The spring device of claim 1 and dependent claims 2-6, 11, 12, and 15-19 includes first and second members and *a spring mechanism* therebetween *having at least a first and a second spring modulus* for producing the gripping force, where *the spring mechanism applies a first range of gripping forces with the force produced by the first spring modulus and a second range of gripping forces with force produced by the second spring modulus*. Independent claim 20 relates to a compression cylinder for a set of pinch rollers in a welding wire feeder. The compression cylinder of independent claim 20 and claims 21-24, 26, 27, and 30 depending therefrom includes *a spring mechanism* extending between first and second members *having at least a first and a second spring modulus*. The spring mechanism produces the gripping force as the first and second members are displaced relative to one another, with the cylinder urging one roller toward the other to apply the gripping force, and *the cylinder applying a first range of gripping forces with force produced by the first spring modulus and a second range of gripping forces with force produced by the second spring modulus*. FIG. 5 of the drawings shows an example of the operation of first and second spring moduli applying a first range of gripping forces (indicated at 260) with force produced by the first spring modulus and a second range of gripping forces (264) with force produced by the second spring modulus, wherein the amount of deflection determines the spring force range of operation.

Kensrue 6,568,578 fails to teach or suggest the first and second spring moduli of claims 1-6, 11, 12, 15-24, 26, 27, and 30. Rather, Kensrue 6,568,578 shows three distinct positions for spacer 110 (first position in FIG. 7 described at col. 8, line 8 through col. 9, line 13; second position in FIG. 8 described at col. 9, lines 14-43; and third position in FIG. 9 described at col. 9, lines 44-64). The operation is described at col. 9, line 65 through col. 11, line 11, wherein an adjustable spacer 100 is movable between first, second, and third *preset conditions*, none of which appear to provide first and second spring moduli. Indeed, the operator of the device in Kensrue 6,568,578 can apply engagement force to the wire only by moving the adjustable spacer 110 into either the first or second positions, corresponding to steel and aluminum filler wires (col. 10, lines 1-14) to select one of two *predetermined forces*, wherein the operator must flip the adjustment spacer 110 to change the engagement force (col. 10, lines 22-24). Kensrue 6,568,578 therefore fails to teach all the elements of independent claims 1 and 20, and corresponding dependent claims 2-6, 11, 12, 15-10, 21-24, 26,

27, and 30, whereby reconsideration and withdrawal of the rejection of claims 1-6, 11, 12, 15-24, 26, 27, and 30 is respectfully requested under 35 U.S.C. § 102.

VII. REJECTION OF CLAIMS 7-10 AND 25 UNDER 35 U.S.C. § 103

Claims 7-10 and 25 were rejected under 35 U.S.C. § 103 as being unpatentable over Kensrue 6,568,578 in view of Tabellini 5,775,619. Applicants submit that the proposed combination of Kensrue 6,568,578 with Tabellini 5,775,619 fails to teach or suggest each and every element of claims 7-10 and 25, and further that there is no motivation or suggestion for the proposed combination, whereby reconsideration and withdrawal of these claim rejections is respectfully requested for at least the following reasons.

As discussed above with respect to claims 1-6, 11, 12, 15-24, 26, 27, and 30, Kensrue 6,568,578 fails to teach or suggest the first and second spring moduli in the context of a wire gripping device for a welding wire feeder and a compression cylinder thereof. In claims 7-10 and 25, the spring mechanism produces the gripping force as the first and second members are displaced relative to one another, wherein the gripping force is axial with respect to the first and second springs. In contrast, the winding rollers of Tabellini are constructed for radial force with helix springs being wound up during cover extension and being unwound during cover retraction, wherein there is *no teaching or suggestion of compressing or stretching the springs of Tabellini in an axial direction*. In particular, the springs of Tabellini 5,775,629 are loaded by fixing one end and rotating the other with respect thereto about the spring's axis (col. 3, lines 17-19, 22-25, 28-32). Moreover, Tabellini 5,775,629 does not appear to teach provision of multiple different spring moduli, even in the rotational sense. Thus, the proposed combination of Kensrue 6,568,578 with Tabellini 5,775,619 fails to teach the elements of claims 7-10 and 25, and there is no motivation or suggestion for attempting the proposed combination. Applicants accordingly request reconsideration and withdrawal of the rejections of claims 7-10 and 25 under 35 U.S.C. § 103.

VIII. CLAIMS 13, 14, 28, 29, AND 31-54

The Office Action indicated that claims 13, 14, 28, and 29 were objected to as being dependent on a rejected claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. By the above amendment, these claims have been accordingly rewritten in independent form, together with the above mentioned corrections

relating to antecedent basis and spelling, whereby these claims have not been narrowed and are now believed to be in condition for allowance. In addition, new claims 31-54 have been added, with claims 31-46 (similar to amended claims 2-12 and 15-19) depending ultimately from independent claim 13, and with new claims 47-54 depending from claim 29 and being similar to amended claims 21-27 and 30. Accordingly, claims 13, 14, 28, 29, and 31-54 are believed to be in condition for allowance and notice thereof is respectfully requested.

VIII. CONCLUSION


The specification and abstract have been amended to correct various typographical and antecedent basis issues without adding new matter, claims 1, 7, 8, 12-17, 19, and 21-30 have been amended without narrowing the scope thereof, and new claims 31-54 have been added. For at least the above reasons, the currently pending claims 1-54 are believed to be in condition for allowance and notice thereof is requested.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 06-0308, LEEE200293.

Respectfully submitted,

By:


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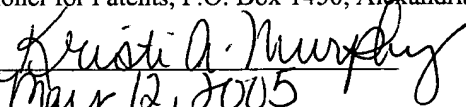
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I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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